

Notice of Allowability

Application No.

10/722,431

Examiner

Rhonda S. Peace

Applicant(s)

KONDO, TAKAYUKI

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed 1/17/2007.
2. ☒ The allowed claim(s) is/are 3-6,8,9,12-16,24 and 25.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

M.R. Connelly-Cushwa
MICHELLE CONNELLY-CUSHWA
PRIMARY EXAMINER
3/14/07

Rhonda S. Peace
Rhonda S. Peace
Examiner, Art Unit 2874

DETAILED ACTION

Allowable Subject Matter

Claims 3-6, 8, 9, 12-16, 24, and 25 are allowed.

The following is an examiner's statement of reasons for allowance: The applicable prior art does not disclose, or reasonably suggests, an optical interconnection circuit comprising an integrated circuit chip upon which first and second circuit blocks *which are optically and electrically connected*, as well as first and second waveguides are provided, wherein the first circuit block includes first and second light emitting elements which respectively emit first and second lights (the wavelength of the first light being different from the wavelength of the second light), and the second circuit block includes third and fourth light receiving elements, where the third light receiving element receives the first light and the fourth light receiving element receives the second light, and the first waveguide optically connects the first light emitting element and the third light receiving element, and the second waveguide optically connects the second light emitting element and the fourth light receiving element, and further includes a common light reflecting frame that reflects the first and second lights.

Moreover, the applicable prior art does not disclose, or reasonably suggest, an optical interconnection circuit comprising an integrated circuit chip upon which first and second circuit blocks, as well as first and second waveguides are provided, wherein the first circuit block includes first and second light emitting elements which respectively emit first and second lights (the wavelength of the first light being different from the wavelength of the second light), and the second circuit block includes third and fourth

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light receiving elements, where the third light receiving element receives the first light and the fourth light receiving element receives the second light, and the first waveguide optically connects the first light emitting element and the third light receiving element *and detours around the third circuit block*, and the second waveguide optically connects the second light emitting element and the fourth light receiving element, and further includes a common light reflecting frame that reflects the first and second lights.

Worley (US 6393183), considered to be the closest piece of art to the structural limitations of the current invention, is concerned with optically coupling two circuit blocks that must remain electrically isolated from one another. Therefore, there is no disclosure or motivation to electrically connect the circuit blocks, as is called for in claim 16 of the current invention. In addition, in all embodiments of Worley, the waveguides are either routed on the top surface of the blocks, suspended over the blocks, or travels through the blocks. Therefore, there is no teaching or motivation to suggest routing a waveguide around a third block, as is called for in claim 25 of the current invention.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

Applicant's arguments, see page 6, filed 1/17/2007, with respect to the rejection of claims 3, 4, 6, 8, 12-16, and 24 under 35 U.S.C. §103(a) have been fully considered

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and are persuasive. The rejection of claims 3, 4, 6, 8, 12-16, and 24 has been withdrawn.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rhonda S. Peace whose telephone number is (571) 272-8580. The examiner can normally be reached on M-F (8-5).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272- 2344. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

 3/9/07
Rhonda S. Peace
Examiner
Art Unit 2874


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3/14/07